1.11 Targeted Waterfowl Monitoring
Last Updated 1/14/2016

When staffing allows, refuge-wide waterfowl monitoring **occurs year-round on a bi-weekly basis**. The number of individuals by species within each water management unit is recorded.

This ISI is only intended to be used until such time as the *1.03 Wetland State-and-Transition Model Monitoring* **SOP is finalized**. At that time, a site-specific protocol will be developed for the Refuge as a step-down from the finalized *1.03 Wetland State-and-Transition Model Monitoring* SOP methodology and the new site-specific SOP will be replace this ISI and should be linked to the Refuge's IMP through PRIMR*.

*Updating the water monitoring protocols and development of the site-specific protocol should be coordinated with the IMP Zone Biologist.

What to Take in the Field:

- **9 Blank Datasheets** – 1 for each unit
- **Refuge map w/ sub-units**
- **Pencils**
- **Clip Board**
- **Binoculars**
- **Spotting Scope**
- **Bird Identification book/s**

Datasheets:

1. **Blank survey datasheets** are available in the '**Bird Surveys Blank Datasheet'** binder.
2. **Refuge maps with sub-units** are available in the '**Bird Surveys Blank Datasheet'** binder.

Survey Methodology:

1. This can be done with one experience person, but it is much easier and **more efficient with two** who can trade off being observer and reorder on opposite sides of the vehicle.
2. This survey entails systematically driving the Refuge and thoroughly surveying wetland habitats for and recording sighting of waterfowl and geese. You want to drive the Refuge in such a way as to minimize disruption to the birds and to avoid driving past a wetland habitat area before you are surveying that area. You should drive north on the western most road and start with the northern most management units and move south. **Plan out your path prior to beginning surveys**.
3. As you approach open water, you will need **slow down to a crawl**, minimizing noise and trying to avoid spooking the birds. They will move off some, but you want to avoid a large 'flush'.
4. Once you get close enough that you can start to be able to identify species through the spotting scope, stop and begin your count.
5. You will need to record the unit and sub-unit each individual/group is located in and differentiate between them on your datasheets (see past survey sheets for examples).
6. Each management unit should have their own datasheet!

7. **In some cases, you will need to take turns surveying on both side of the vehicle before moving forward some.** Once you have identified and count all that you can, you will move forward until you are able to start counting 'new' birds. Some bird may move, do your best to track where they go. **If they move into an area you haven't counted yet make sure NOT to re-count (double count) them.**
8. Don't forget to survey flooded saltgrass and the southern edges of the pools.
9. Continue your survey until the entire Refuge has been surveyed.

Data Entry Instructions:

The data you are about to enter is used to track annual trends, formulate annual reports and to make management decisions. It is important that the data is collected and entered as correctly as possible.

Please make sure to ask a staff member for help anytime you have questions.
Please read the entire sheet before starting, and review these instructions if you haven't entered this data recently and are a little fuzzy.

Please remember to read each instruction entirely before beginning to enter data.
You may have as many as 18 sheets of data per data collection effort: 9 Waterfowl/Waterbird sheets and 9 Shorebirds/Gulls/Terns sheets – many are double sided, but some are not, make sure you don't miss a sheet!
On each completed datasheet, there is a column labeled "*Sub-Location Count*". In this column, you should find numbers of birds, as well as the abbreviation for the subunit where they were seen. *ex: if the observer saw 10 pintails in the western subunit of Avocet, then s/he should record 10w on the datasheet labeled "Avocet" in the row designated "Northern Pintail".* Don't forget to reference the unit map to familiarize yourself with the sub-units associated with the main units.

Please Note: These instructions do not include special instructions for entering data for species of special concern (i.e. American bittern, Virginia rail, snowy plover, American avocet, curlew, and ibis). If these species are included on your list, see staff for special instructions.

1. For each species recorded, add all the values in the "*Sub-Location Count"* column that have the same sub-unit designated (all the m's, all the p's, all the w's, etc.), record these sums in the column labeled "count" along with their sub-unit designation.
2. In the "count" column, calculate the total number of observations for each species (add all the sub-unit totals from step 1), and record the total number followed by the designation "*T*", for total.
3. Repeat steps 1 & 2 for each species on the sheet, and each completed data sheet.
4. The Bird database is located on the local server at : *I:\BIOLOGY PROGRAM\Databases* and is labeled **Birds.mdb**.

5. Open the Birds.mdb file, a menu box will appear featuring a picture of the Fish Springs NWR sign. There will be 6 buttons to choose from, select the button in the lower left hand side labeled "Enter Bird Counts".
    a. If a security box opens, press "options" then "enable" then "OK" to give yourself access to the database.
    b. There is a button under the heading "Generic Queries" labeled "Bird Counts" – this is **not** the button you are looking for.

    Hit "Tab" or "Enter" to progress to the next box

6. **SPECIES SELECTION:** Once the entry form has opened, click on the first white drop down menu under the heading "*Common Name in Alphabetic order*". Type in or choose from the list provided to fill in the species name for the data you are recording.
    a. Note: Green-winged Teal are listed under "American Green-winged Teal"

    Hit "Tab" or "Enter" to progress to the next box

7. **COUNT:** Once you have selected the correct species, your cursor should move automatically to the "Count" box, or you can click directly on the "Count" box if necessary. Locate the first **sub-unit total** for that species and enter that value into the box.
    a. **If the species was recorded in multiple sub-unit locations within each unit, you will have to enter species information and count for EACH new sub-location in a new record, where you will re-enter all information for each sub-unit.**

    Hit "Tab" or "Enter" to progress to the next box

8. **Week Num:** This information is available from the internet if a calendar is not already provided with week numbers listed. A Google search of "annual calendar with week count" should provide links to calendars with week numbers listed. Make sure you are viewing the calendar year appropriate for the data you are entering. Locate the date of the survey and see what week of the year that week is (1-52). That will be the value you enter into the "*Week Num*" box for all data from that survey date.

    Hit "Tab" or "Enter" to progress to the next box

9. **YEAR:** Type in the year the survey was conducted.

    Hit "Tab" or "Enter" to progress to the next box

10. **BANDED:** You will not need to put any information in this box.

    Hit "Tab" or "Enter" to progress to the next box

11. **UNIT:** Select the unit in which the data you are entering was counted.
   a. **ANYTHING RECORDED IN "AVOCET" LABLED AS "SP" OR "SPRINGS" SHOULD BE TREATED SEPERATLY. "SPRINGS" IS NOT A SUB-UNIT, BUT ITS OWN UNIT. IT IS JUST RECORDED ON THE AVOCET DATASHEET. DATA COLLECTED FROM "SPRINGS" UNIT WILL NOT HAVE A SUB UNIT ASSOCIATED WITH IT.**

   Hit "Tab" or "Enter" to progress to the next box
12. **HABITAT:** You will not need to enter any information for this field.

   Hit "Tab" or "Enter" to progress to the next box

Sub Unit: if you are entering "*Sub-location*" data, select the correct sub-unit to match the total for which you are entering.

   a. Abbreviations from datasheet are equal to: M=Mid, W= West, SL=Slough, S=South, N=North, P=Main Pool, E=East, Mud=Mud.

   Hit "Tab" or "Enter" to progress to the next box

13. Repeat steps 6-13 for each sub-unit count for the species.
14. Re-enter all the species info, and then in the "Count" box, enter the "T" or "total" value you calculated for each species per unit earlier. Enter the "week num", year, and unit as usual. Leaving the "*Sub Unit*" box unchecked, in the comment box enter "Unit Grand Total".
15. Hit the arrow key at the bottom-middle of the data entry box to proceed to the next blank record.
16. Repeat steps 6-15 for all remaining species on the sheet.
17. Repeat steps 6-16 for all remaining data sheets!